



# LAUNCH A SPACE CAREER

A student resource guide



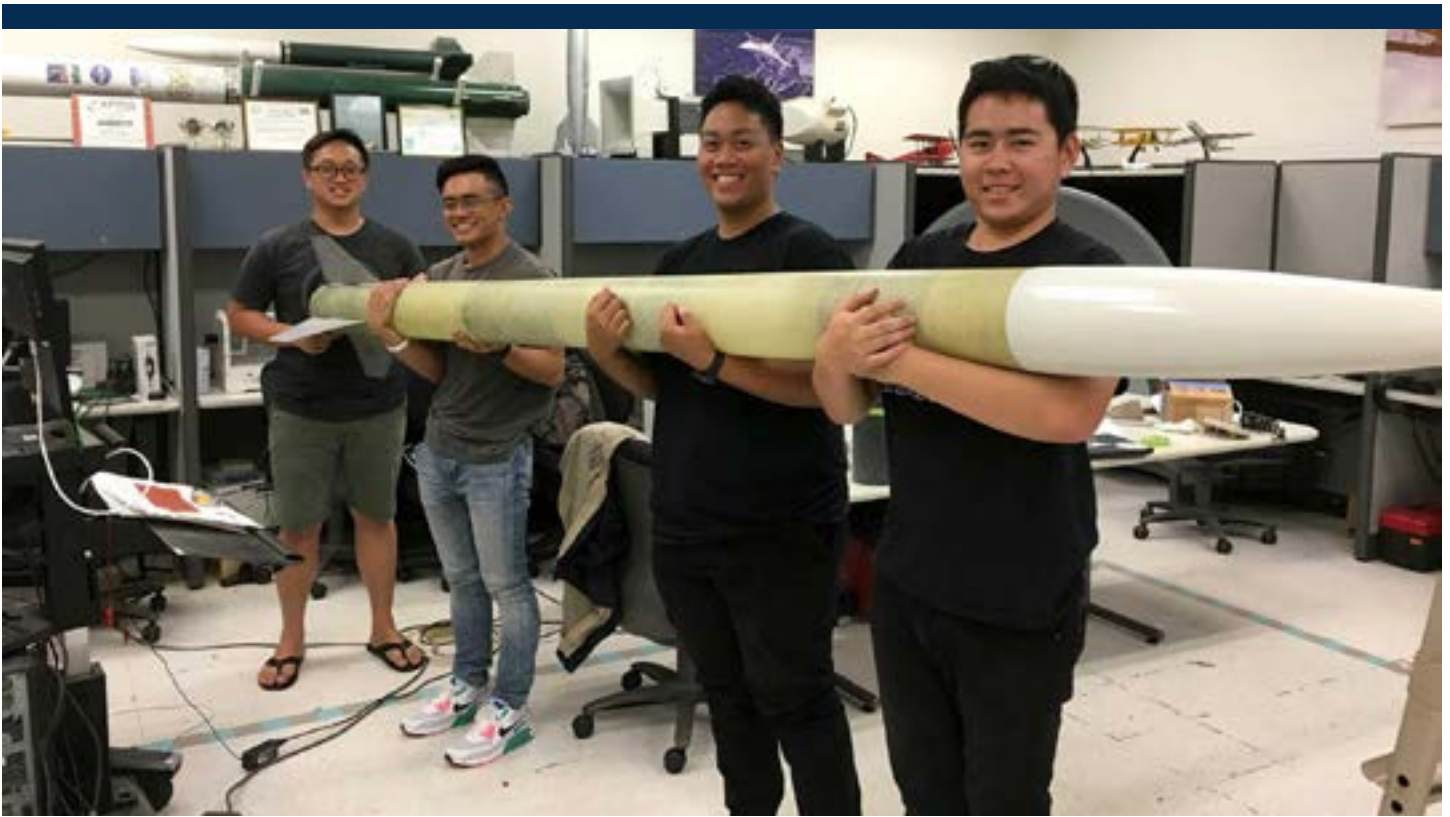
INTERNSHIPS • SPACE PROGRAMS • SCHOLARSHIPS • NETWORKING



## Interested in a Space Career?

We are living in an exciting new era of space exploration when ideas once considered the realm of science fiction are becoming reality. With the quickening pace of technology, the next generation of scientists, engineers, and explorers will unlock mysteries of our solar system, travel to the Moon and Mars, discover Earth-like exoplanets, and peer deeper into the universe than ever before. Forging a path in this rapidly evolving world doesn't have to be rocket science. Read on to explore some of the many opportunities you can pursue to chart a course toward an exciting career in space.

*Above: Students at the Hawai'i Space Flight Laboratory design, build, launch and operate micro-satellites.  
Photo: HSFL*



# Local Internships & Space Programs

## Aerospace Engineering Program at UH Mānoa

The College of Engineering at UH Mānoa offers courses and applied research opportunities in aeronautics, astronautics, and astrodynamics. Accepted students get opportunities to build and launch rockets and micro-satellites, contribute to aerospace research and technology, and compete in nationwide competitions

[Learn more >](#)

*Above: UH Mānoa rocketry team.  
Photo: UH Mānoa*

## Hawai'i Space Flight Laboratory (HSFL)

HSFL is a multidisciplinary research and education center under the School of Ocean and Earth Science and Technology (SOEST) at UH Mānoa. The lab supports innovative research for terrestrial and planetary space missions and works to provide workforce training in various aspects of unmanned space missions. Students design, build, launch, and operate small spacecraft that are configured for a variety of science and educational tasks.

[Learn more >](#)



*Above: Akamai interns working at the summit of Muanakea. Photo: Akamai*

## Akamai Internship Program

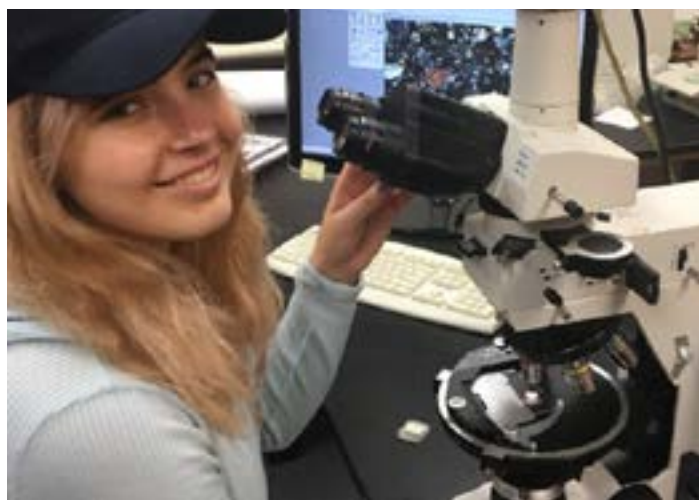
The Akamai Workforce Initiative is an award-winning STEM internship program for students from Hawai'i, or undergraduates attending any University of Hawai'i campus. Accepted students gain summer work experience at an observatory, company or scientific/technical facility in Hawai'i. The program has an established track record of successfully helping students acquire a broad range of STEM careers and strives to provide opportunities to groups that are underrepresented in STEM fields. Placements are available for students from both community colleges and four-year universities.

[Learn more >](#)

## Hawai'i Space Grant Consortium (HSGC)

HSGC is a NASA-supported community education program for University of Hawai'i undergraduate students promoting a broad range of studies in scientific and technical fields related to space. These include: astronomy, biology, chemistry, computer science, engineering, math, meteorology, oceanography, physics, remote science, and space science. Four-year university and community college students within the UH system are eligible to apply, as well as students attending the University of Guam.

[Learn more >](#)



*Photo: HSGC*



## PISCES

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The Pacific International Space Center for Exploration Systems (PISCES) at UH Hilo's College of Natural and Health Sciences offers paid and credit-based internships to undergraduate students interested in planetary geology, materials science, and robotics. Interns get hands-on experience doing real research projects focused on developing technology and capabilities for space exploration.

[Learn more >](#)

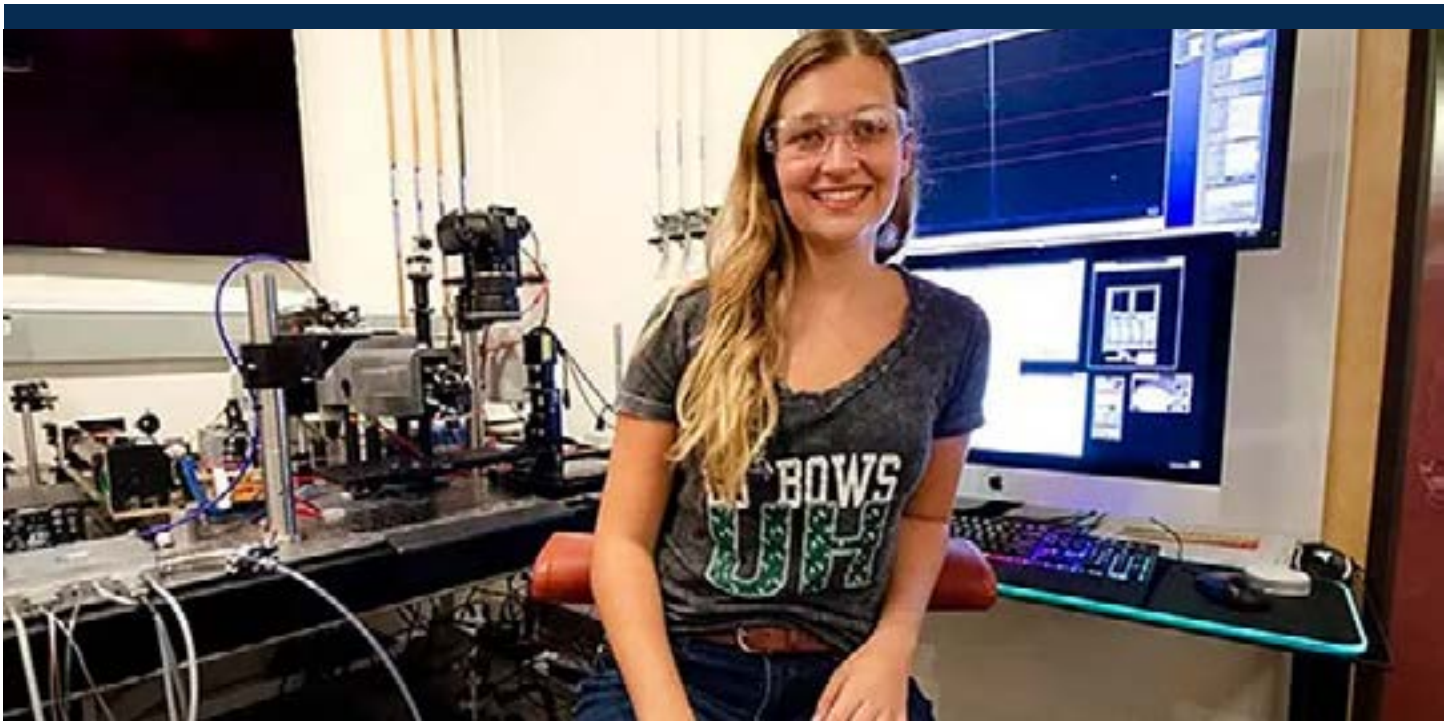
*Above: PISCES interns cultivate coding and engineering skills through hands-on projects with a planetary analog rover. Photo: PISCES*

## Maunakea Scholars

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Maunakea Scholars offers Hawai'i high school students direct access to some of the world's most powerful telescopes. Students write their own scientific proposals for study time using one of 11 different observatories. Those awarded observing time receive mentorship from University of Hawai'i Institute for Astronomy graduate students while learning to analyze data and apply the scientific method. Top-performing students may be awarded a \$10,000 scholarship to study astronomy in college.

[Learn more >](#)



# National Internships & Space Programs

## NASA Internships

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NASA offers a variety of paid internships for high school- and college-level students to contribute to space exploration projects with guidance from NASA mentors. Some internships are designed as pathways for students and recent graduates to land full-time jobs at NASA. The agency also offers fellowships for graduate students to pursue research aligning with NASA priorities.

[Learn more >](#)

## JPL Summer Internship

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NASA's Jet Propulsion Laboratory in Pasadena, California offers full-time internships during May and June to undergrad and grad students pursuing STEM degrees. Interns get hands-on experience and contribute to real space missions under the guidance of JPL scientists and engineers. The program includes access to tours, lectures, and career guidance resources.

[Learn more >](#)

*Above: UH Mānoa geology student Schelin Ireland spent the summer of 2019 helping NASA prepare a life-hunting instrument for the Mars 2020 rover mission. Photo: NASA/JPL-Caltech*

## Community College Aerospace Scholars

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NASA's Community College Aerospace Scholars (NCAS) program offers three missions to challenge and build students' knowledge and skills in STEM fields by focusing on NASA mission goals, collaboration, and career pathways. Participating students from two-year colleges can learn at their own pace through online courses with guidance from trained educators. NCAS provides simulations on design solutions and workplace dynamics and an in-person engineering design challenge.

[Learn more >](#)



*Above: NCAS community college students test a robot design at NASA JPL for Mars rover missions. Photo: NASA/JPL-Caltech*

## NASA MINDS

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MUREP Innovative New Designs for Space (MINDS) is a NASA-funded fellowship supporting college students from schools classified as Minority Serving Institutions. Teams of students can apply for MINDS by submitting a technology design from predetermined categories. The technology assists NASA's overarching goal of returning humans to the moon through the Artemis program.

[Learn more >](#)

## UC Santa Cruz Science Internship Program

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The University of California at Santa Cruz offers a 10-week summer science internship experience for high school students. Students are mentored by UCSC faculty and conduct real research in a variety of STEM fields including: astrophysics, biology, computer science, physics, psychology, and others. The program is offered fully remote, in-person, or as a hybrid schedule. Partial and full scholarships are available to students in need of financial assistance.

[Learn more >](#)



## JPL Visiting Student Research Program

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If you've already been awarded funding for an internship or fellowship by a third party for any research project that is compatible with NASA objectives, you are eligible to apply for NASA JPL's Visiting Student Research Program (JVSRP). JVSRP is a full-time or part-time fellowship with flexible scheduling that offers mentorship with scientists and engineers at JPL in Pasadena, California. Participating students have access to additional activities like tours, lectures, and career advising.

[Learn more >](#)

## NASA Science Mission Directorate: Learner Opportunities

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NASA offers dozens of STEM-related internship and scholarship opportunities for students at various stages in their education: high school, college undergrad, graduate, or postdoctoral. Some programs occur only at NASA centers while others support students and scientists at their own universities. View listings of all the programs using the link below.

[Learn more >](#)





# Space Community & Networking

## EMER-GEN Program

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Part of the annual Maui Optical and Space Surveillance Technologies (AMOS) conference, the EMER-GEN program offers a variety of opportunities for students and young professionals who are passionate about space careers. Participants receive mentoring from advisors in industry, government, academia, and NGOs, network with other young professionals, and attend technical short courses and professional development sessions.

[Learn more >](#)

*Above: EMER-GEN attendees speak with a representative from the U.N. Institute for Disarmament Research.  
Photo: EMER-GEN/MEDB*

## American Astronomical Society (AAS)

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AAS is the largest North American organization of astronomers with members from all fields in the astronomical sciences including physics, math, geology, engineering, and others. Students with a membership get access to research publishing opportunities, exclusive content, astronomy job listings, career development opportunities, and attendance at AAS meetings where new discoveries are shared and communities are created.

[Learn more >](#)

## American Institute of Aeronautics and Astronautics (AIAA)

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AIAA is the world's largest technical society dedicated to professions in aerospace. Membership is free to high school students; college students pay a fee and gain access to a number of valuable resources. Members get access to activities, competitions, scholarships related to STEM, networks to find mentors, and opportunities to present research papers. AIAA also offers access to career centers, webinars, and workshops, as well as a community of peers with shared interests.

[Learn more >](#)



## Scholarships

### AIAA Foundation

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In support of future aerospace professionals, AIAA Foundation provides annual scholarships and graduate awards to eligible college students around the world who are enrolled in science and engineering programs. Applicants may apply for up to three scholarships or graduate awards at a time.

[Learn more >](#)

### Universities Space Research Association (USRA)

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USRA provides innovative learning opportunities for students at all levels who are involved in space and aeronautics research. Full-time undergraduate students enrolled at a four-year institution with degree programs in science or engineering are eligible to apply for one of five USRA scholarship opportunities.

[Learn more >](#)



# Developing aerospace in Hawai'i and supporting young explorers.



**Pacific International Space Center for  
Exploration Systems (PISCES)**

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University of Hawai'i at Hilo

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